

REMARKS/ARGUMENTS

Claims 1-30 are pending in the present application.

This Amendment is in response to the Office Action mailed June 5, 2003. In the Office Action, the Examiner objected to the title, Abstract of the Disclosure, rejected claims 1-30 under 35 U.S.C. §102(b). Reconsideration in light of the amendments and remarks made herein is respectfully requested.

Title

1. In the Office Action, the Examiner objected to the title. In particular, the Examiner stated that the title of the invention is not descriptive and broad. Applicant respectfully disagrees. The invention is related to task-level multiprocessor system. The task-based technique is a new technique to support task execution in a multiprocessor system. The phrase "task-level multiprocessor system", therefore, is descriptive for the invention.

Therefore, Applicant respectfully requests the objection to the title be withdrawn.

Specification

1. The Examiner objected to the abstract because it does not describe the disclosure sufficiently to assist readers in deciding whether there is need for consulting the full patent text for details. Applicant respectfully disagrees. First, the Examiner has not pointed out what part of the disclosure that is not sufficiently described in the abstract. Second, a patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. MPEP 608.01(b). "Where applicable, the abstract should include the following: (1) if a machine or apparatus, its organization and operation,...". MPEP 608.01(b).

Here, the invention is directed to a task manager in a multiprocessor system. The organization and operation of the task manager is shown in Figure 2A and summarized in the abstract.

Therefore, Applicant respectfully requests the objection be withdrawn.

Rejection Under 35 U.S.C. § 102

1. In the Office Action, the Examiner rejected claims 1-30 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,404,483 issued to Stamm et al. ("Stamm"). Applicant respectfully traverses the rejection and contends that the Examiner has not met the burden of establishing a prima facie case of anticipation.

Stamm discloses a processor and method for delaying the processing of cache coherency transactions during outstanding cache fills. A multiprocessor system has a primary cache, an interface unit, and a memory management unit, and others. The primary cache is a two-way set associative, read allocate, no-write allocate, write-through, physical address cache of instruction stream and data stream data (Stamm, col. 11, lines 12-15). An interface unit functions to interconnect the processor bus with the system bus (Stamm, col. 20, lines 50-52; Figure 7). Arbitration and data transfers occur simultaneously, with multiplexed data and address lines (Stamm, col. 20, lines 55-56). A memory management unit receives read requests from the instruction and execution units, receives write/store requests from the execution unit, as well as invalidates, primary cache fills and return data from the cache controller unit (Stamm, col. 6, lines 49-58).

Stamm does not disclose, either expressly or inherently, (1) a task table to store task entries corresponding to tasks executed by at least one processor, (2) a block allocation circuit to allocate blocks of cache memory, and (3) a task coordinator to coordinate the tasks in response to a task cycle issued by the at least one processor.

In the Office Action, the Examiner cited Stamm (Figure 7, CPU bus, and col. 4, lines 12-13) to support the contention that Stamm teaches a task table to store task entries. However, the cited paragraph and figure merely show a bus interface and arbiter unit. It does not show a task table. Similarly, Stamm at column 11, lines 12-27 merely discloses a primary cache, not a block allocation circuit to allocate blocks of cache memory. Last, Stamm at Figure 1, element 25 merely shows a memory management unit, not a task coordinator.

Stamm merely discloses a technique to delay the processing of cache coherency transactions. Stamm does not disclose or suggest task executed by a processor. Tasks are partitioned program routines that can be executed in parallel (Specification, page 3, lines 15-16).

A task may be partitioned into an instruction block and a data block (Specification, page 3, lines 23-25).

Nowhere in Stamm that the task, task entries, task table, block allocation circuit, and task coordinator are disclosed. Stamm merely disclosed a typical cache management circuit using traditional cache memory.

To anticipate a claim, the reference must teach every element of a the claim. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Vergegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ 2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the...claim." Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ 2d 1913, 1920 (Fed. Cir. 1989).

Claims should be interpreted consistently with the specification, which provides content for the proper construction of the claims because it explains the nature of the patentee's invention. See Renishaw, 158 F.3d 1250. During patent examination, the pending claims must be "given the broadest reasonable interpretation consistent with the specification". See MPEP 2111. The terms "task", "task entries", "task table", "block allocation circuit," and "task coordinator" should be interpreted consistently with the specification such as provided on page 3 (lines 15-20, lines 23-26), page 7 (lines 12-25) and page 8 (lines 1-7).

Therefore, Applicant believes that independent claims 1, 11, 21 and their respective dependent claims are distinguishable over the cited prior art references. Accordingly, Applicant respectfully requests the rejection under 35 U.S.C. §102(b) be withdrawn.

Conclusion

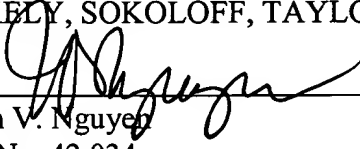
In view of the amendments and remarks made above, it is respectfully submitted that the pending claims are in condition for allowance, and such action is respectfully solicited.

Respectfully submitted,

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